

عنوان مقاله:

River Water Quality Simulation using Optimized Automatic Calibration Method

محل انتشار:

یازدهمین کنگره ملی مهندسی عمران (سال: 1398)

تعداد صفحات اصل مقاله: 9

نویسندگان:

Parastoo Pashmchi - *M.Sc. Graduate, Department of Civil Engineering, Isfahan University of Technology, Isfahan, Iran*

Masoud Taheriyoun - *Assistant Professor, Department of Civil Engineering, Isfahan University of Technology, Isfahan, Iran*

Keyvan Asghari - *Associate Professor, Department of Civil Engineering, Isfahan University of Technology, Isfahan, Iran*

خلاصه مقاله:

By increasing population and the expansion of various industries, river, as one of the most vital available water resources, have been confronted with wastewater discharges and water quality problems. Therefore, different models and software are developed to evaluate the impact of pollution loads. The QUAL2K model is one of the most prominent softwares for the simulation of river pollution impact evaluation. This model is able to simulate plenty of water quality parameters in a river network. In this paper, after primary evaluations of available data, three water quality parameters were selected as the main parameters including NO₃, BOD and DO for the Zayandeherood River. These parameters were simulated using the QUAL2k model for four seasons. Due to the interactions between these parameters in a river and the complexity of the calibration calculations, Particle Swarm Optimization (PSO) algorithm with the objective of minimizing the difference between simulated values and observed data was used. The results of the validation for different simulation period, using standard statistical tests, confirmed the accuracy of the proposed .automatic calibration

کلمات کلیدی:

Water Quality Simulation, QUAL2k, River Quality, Automatic Calibration

لینک ثابت مقاله در پایگاه سیویلیکا:

<https://civilica.com/doc/918222>

